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DES MOINES, IA 50309-2721

EXAMINER
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DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/042,863	BOESEN, PETER V.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Raymond S Dean	2684	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Examiner acknowledges the amendment to Claims 36 and 37 therefore the rejection under 35 U.S.C. 112 is withdrawn.
2. Applicant's arguments with respect to claim 1 – 50 have been considered but are moot in view of the new ground(s) of rejection.

Aoki et al. (5,933,506), hereafter Aoki, teaches an air conduction sensor and a bone conduction sensor (See Figure 1, Column 6 lines 23 – 43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the earset of Ditzik with the ear piece circuitry of Aoki for the purpose of providing an earset that automatically processes the speech sending signal in accordance with use environments, that have high noise and ambient noise, to send speech of the best tone quality as taught by Aoki.

Regarding Claim 38, Examiner respectfully disagrees with applicant's assertion on page 10 2<sup>nd</sup> paragraph of the Remarks "Ditzik does not disclose that the card ...". The typical PCMCIA card used in notebook computers enable said notebooks to connect to a network via short range wireless protocols such as Bluetooth and 802.11 in order to communicate with other network devices such as the earset. Ditzik therefore teaches this limitation.

Regarding Claim 40, Examiner respectfully disagrees with applicant's assertion on page 10, 3<sup>rd</sup> paragraph "Ditzik does not disclose a PCMCIA card ...". Ditzik teaches a PCMCIA that includes a modem, which comprises voice modems; therefore there will be a voice transceiver for the transmission of voice.

Regarding Claim 43, Examiner respectfully disagrees with applicant's assertion on page 11, 1<sup>st</sup> paragraph "The Examiner does not point to any specific disclosure ...". The earset uses a short-range communication protocol such as Bluetooth to communicate with the notebook. The Bluetooth protocol uses a polling method in which a master device (notebook) polls the slave devices (earset) and receives an active member address (AM\_ADDR), which is the identifier, from said slave devices. The access will be granted based on the validity of said AM\_ADDR. Examiner also disagrees with applicant's assertion on page 10 1<sup>st</sup> paragraph of the remarks regarding Claim 29 "Ditzik does not disclose this limitation ...". Examiner disagrees for the same reason set forth above.

Regarding Claim 2, Examiner agrees with applicant's assertion that Eghtesadi does not teach a headset that includes multiple input sensors. Eghtesadi, however, teaches a headset (See Column 2 lines 45 – 48). Ditzik and Eghtesadi teach a wireless device that enables a user to communicate hands-free thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the headset taught by Eghtesadi as an alternative means for hands-free communication in the system of Ditzik.

Regarding Claim 30, Examiner agrees with applicant's assertion on page 14 2<sup>nd</sup> paragraph "It is further submitted that Talmor simply does not disclose ...". Talmor, however, teaches comparing the voice sound information to voice sound information from a known source for security purposes (Column 5 lines 18 – 29, Column 7 lines 53 – 62, Column 8 lines 6 – 9, in order to authenticate the speaker's voice there will be a comparison between the speaker's voice and a known sound). Ditzik and Talmor teach a computer that receives voice information thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the authentication method taught in Talmor in the computer of Ditzik as an alternative means for preventing an unauthorized user of the earpiece from communicating with the computer for further access to the wide area network as taught by Talmor.

Regarding Claim 44, Examiner disagrees with applicant's assertion on page 14 4<sup>th</sup> paragraph "Examiner relies upon an improper combination of Ditzik with Talmor as ...". It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the authentication method taught in Talmor in the computer of Ditzik as an alternative means of preventing an unauthorized user of the earpiece from communicating with the computer for further access to the wide area network as taught by Talmor.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 38 – 41, 43, and 45 – 49 are rejected under 35 U.S.C. 102(e) as being anticipated by Ditzik (5,983,073).

Regarding Claim 38, Ditzik teaches a removable card for voice communications over multiple channels comprising: a removable card body adapted to be removeably inserted into a slot (Column 4 lines 50 – 53, the PCMCIA card, which houses the wireless communication means, is removable); a short-range transceiver disposed within the removable card body and adapted for two-way voice communications with a hands-free communication unit (Column 4 lines 50 – 53, the typical PCMCIA card used in notebook computers enable said notebooks to connect to a network via short range wireless protocols such as Bluetooth and 802.11 in order to communicate with other network devices such as the earset, the PCMCIA card will therefore comprise a short-range transceiver).

Regarding Claim 39, Ditzik teaches all of the claimed limitations recited in Claim 38. Ditzik further teaches a card bus connector attached to the body for interfacing the card to a computer (Column 4 lines 50 – 53, there will be a connector attached to the PC card such that said PC card can be inserted into a slot in the computer).

Regarding Claim 40, Ditzik teaches all of the claimed limitations recited in Claim 38. Ditzik further teaches a voice transceiver disposed within the body and adapted for communications over a voice communication network (Column 4 lines 50 – 53, the PCMCIA includes a modem, which comprises voice modems, therefore there will be a voice transceiver for the transmission of voice).

Regarding Claim 41, Ditzik teaches all of the claimed limitations recited in Claim 38. Ditzik further teaches a port for electrically connecting an external voice transceiver to the removable card (Column 4 lines 50 – 53, the PC card houses the wireless communication means, which comprises a voice transceiver, thus there will be a port for electrically connecting said voice transceiver to said PC card).

Regarding Claim 43, Ditzik teaches a method of providing secure access to a computer comprising: receiving an identifier from a hands-free voice communication unit at the computer over a short-range first communications channel (Figure 3a, Figure 7, Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset uses a short-range communication protocol such as Bluetooth to communicate with the notebook, the Bluetooth protocol uses a polling method in which a master device (notebook) polls the slave devices (earset) and receives an active member address (AM\_ADDR), which is the identifier, from said slave devices, the access will be granted based on the validity of said AM\_ADDR); granting access based on the identifier (Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset uses a short-range communication protocol such as Bluetooth to communicate with the notebook, the Bluetooth protocol uses a polling method in which a master device

(notebook) polls the slave devices (earset) and receives an active member address (AM\_ADDR), which is the identifier, from said slave devices, the access will be granted based on the validity of said AM\_ADDR); transceiving voice sound information between the hands-free voice communication unit and the computer over the short-range first communications channel (Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42); and transceiving voice sound information between the computer and a remote location over a second communications channel (Column 8 lines 43 – 45, the computer will relay voice information via the wireless communication means on a channel configured for transmitting to a wide area network such as a PCS network).

Regarding Claim 45, Ditzik teaches all of the claimed limitations recited in Claim 43. Ditzik further teaches wherein the identifier is an identifier associated with the hands-free voice communications channel (Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset uses a short-range communication protocol such as Bluetooth to communicate with the notebook, the Bluetooth protocol uses a polling method in which a master device (notebook) polls the slave devices (earset) and receives an active member address (AM\_ADDR), which is the identifier, from said slave devices, the access will be granted based on the validity of said AM\_ADDR).

Regarding Claim 46, Ditzik teaches all of the claimed limitations recited in Claim 45. Ditzik further teaches wherein the identifier is a unique identifier (Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset uses a short-range communication protocol such as Bluetooth to communicate with the notebook, the Bluetooth protocol uses a polling method in which a master device (notebook) polls the



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slave devices (earset) and receives an active member address (AM\_ADDR), which is the identifier, from said slave devices, the access will be granted based on the validity of said AM\_ADDR).

Regarding Claim 47, Ditzik teaches all of the claimed limitations recited in Claim 45. Ditzik further teaches wherein the identifier is an IP address (Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset can communicate with the computer via a short-range link such as a WLAN, the devices that communicate on the WLAN will have IP addresses).

Regarding Claim 48, Ditzik teaches all of the claimed limitations recited in Claim 43. Ditzik further teaches associating a first spatial position with the computer (Column 8 lines 32 – 35, Column 8 lines 38 – 42, the computer can be placed at a particular distance away from the earset, there will be a spatial position associated with said distance).

Regarding Claim 49, Ditzik teaches all of the claimed limitations recited in Claim 48. Ditzik further teaches associating a second spatial position of the voice communications unit based on the first spatial position associated with the computer (Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset can be at a plurality of distances from the computer that will enable short-range communication with said computer, there will be spatial positions associated with each distance).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3 – 24, 36, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (5,983,073) in view of Puthuff (6,112,103) and in further view of Aoki et al. (5,933,506).

Regarding Claim 1, Ditzik teaches a system comprising: a computer having a housing (Figure 3a); a short-range transceiver operatively connected to the computer (Figure 3a, Figure 7, Column 8 lines 14 – 19, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset can communicate with the wireless communication means of the computer over a short range thus said wireless communication means comprises a short range transceiver); a hands-free voice communications device unit in communication with the short-range transceiver (Figure 3a, Figure 7, Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset is the hands-free voice communications unit); the computer adapted to receive voice sound information from a transceiver; and the computer adapted to send voice sound information to the transceiver (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the wireless communication means also comprises a transceiver for data/voice

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communications, said wireless communication means along with the microphone and speakers give the computer wireless phone capability).

Ditzik does not specifically teach a computer adapted to receive voice sound information from a short-range transceiver; the computer adapted to send voice sound information to the short-range transceiver, and wherein the hands-free voice communication device unit comprises a plurality of input sensors.

Puthuff teaches a computer adapted to receive voice sound information from a short-range transceiver and the computer adapted to send voice sound information to the short-range transceiver (Column 1 lines 51 – 54, Column 2 lines 53 – 57, Column 3 lines 34 – 43, the PCN is the short-range transceiver).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the PCN circuitry taught by Puthuff in the computer of Ditzik for the purpose of enabling remote voice control of said computer as taught by Puthuff.

Ditzik in view of Puthuff does not teach wherein the hands-free voice communication device unit comprises a plurality of input sensors.

Aoki teaches a hands-free voice communication device unit that comprises a plurality of input sensors (Figure 1, Column 6 lines 23 – 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the earset of Ditzik in view of Puthuff with the ear piece circuitry of Aoki for the purpose of providing an earset that automatically processes the speech sending signal in accordance with use environments, that have high noise and ambient noise, to send speech of the best tone quality as taught by Aoki.

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Regarding Claim 3, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Ditzik further teaches an earpiece (Column 8 lines 25 – 27).

Regarding Claim 4, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Aoki further teaches a bone conduction sensor (Column 6 lines 23 – 43).

Regarding Claim 5, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Aoki further teaches an air conduction sensor (Column 6 lines 23 – 43).

Regarding Claim 6, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Aoki further teaches both an air conduction sensor and a bone conduction sensor (Column 6 lines 23 – 43).

Regarding Claim 7, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 3. Aoki further teaches wherein the earpiece is smaller in size than an interior of an external auditory canal of a user whereby the earpiece does not block the external auditory canal (Figure 1, Column 6 lines 23 – 43).

Regarding Claim 8, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 3. Aoki further teaches a bone conduction sensor (Column 6 lines 23 – 43).

Regarding Claim 9, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 3. Aoki further teaches both an air conduction sensor and a bone conduction sensor (Column 6 lines 23 – 43).

Regarding Claim 10, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 3. Aoki further teaches an air conduction sensor (Column 6 lines 23 – 43).

Regarding Claim 11, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Ditzik further teaches wherein the short-range transceiver is disposed within the housing of the computer (Figure 3a, Figure 7, Column 8 lines 14 – 19, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset can communicate with the wireless communication means of the computer over a short range thus said wireless communication means comprises a short range transceiver).

Regarding Claim 12, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 10. Ditzik further teaches an antenna electrically connected to the short-range transceiver at least partially extending beyond the housing (Figure 3a, Column 8 lines 14 – 19).

Regarding Claim 13, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Ditzik further teaches a voice transceiver operatively connected to the computer (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the wireless communication means also comprises a transceiver for voice/data communications over a cellular network thus said wireless communication means will also comprise a voice transceiver for the transmission and

reception of voice), the computer adapted to receive voice sound information from the voice transceiver and the computer adapted to send voice sound information to the voice transceiver (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64).

Regarding Claim 14, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 13. Ditzik further teaches wherein the voice transceiver is disposed within the housing of the computer (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64).

Regarding Claim 15, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 13. Puthuff further teaches an antenna electrically connected to the voice transceiver at least partially extending beyond the housing (Column 2 lines 53 – 57, the PCN, which is the voice transceiver, will have an antenna to enable wireless communication with the earpiece).

Regarding Claim 16, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 13. Ditzik further teaches wherein the short-range transceiver and the voice transceiver are disposed within the housing (Figure 3a, Figure 7, Column 8 lines 14 – 19, Column 8 lines 8 – 11, Column 8 lines 32 – 35, Column 8 lines 38 – 42, Column 8 lines 59 – 64, the earset can communicate with the wireless communication means of the computer over a short range thus said wireless communication means comprises a short range transceiver, the wireless communication means also comprises a transceiver for data/voice communications, thus said wireless communication means will also comprise a voice transceiver for the transmission and reception of voice).

Regarding Claim 17, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 13. Puthuff further teaches wherein the voice transceiver is contained within a removable telephone transceiver module (Column 2 lines 9 – 11, Column 3 lines 13 – 14, the PCN, which is the voice transceiver, can be attached to and removed from a cellular phone).

Regarding Claim 18, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 17. Ditzik further teaches wherein the removable module is housed within a PC card (Column 4 lines 50 – 53, the PCMCIA card, which houses the wireless communication means, is removable).

Regarding Claim 19, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Ditzik further teaches wherein the short-range transceiver is a removable short-range transceiver module (Column 4 lines 50 – 53, the PCMCIA card, which houses the wireless communication means, which comprises the short – range transceiver and voice transceiver, is removable).

Regarding Claim 20, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 19. Ditzik further teaches wherein the short-range transceiver module is housed within a PC card (Column 4 lines 50 – 53, the PCMCIA card houses the wireless communication means, which comprises the short – range transceiver and voice transceiver).

Regarding Claim 21, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 13. Ditzik further teaches wherein the voice transceiver and the short-range transceiver are housed within a removable

module (Column 4 lines 50 – 53, the PCMCIA card, which houses the wireless communication means, which comprises the short – range transceiver and voice transceiver, is removable).

Regarding Claim 22, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 21. Ditzik further teaches wherein the removable module is a PC card (Column 4 lines 50 – 53, the PCMCIA card is a PC card).

Regarding Claim 23, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 13. Ditzik further teaches wherein the short-range transceiver is housed within a removable module and a voice transceiver is electrically connected to the removable module (Column 4 lines 50 – 53, the PCMCIA card houses the wireless communication means, which comprises the short – range transceiver and voice transceiver).

Regarding Claim 24, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Ditzik further teaches wherein the hands-free voice communications unit includes a short-range transceiver (Column 8 lines 22 – 25, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset can communicate with the wireless communication means of the computer over a short range).

Regarding Claim 36, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 13. Ditzik further teaches wherein the



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voice transceiver is adapted for cellular communications (Figure 3b, Figure 7, Column 2 lines 57 – 60).

Regarding Claim 50, Ditzik teaches a system comprising: a computer having a housing (Figure 3a); a short-range transceiver operatively connected to the computer (Figure 3a, Figure 7, Column 8 lines 14 – 19, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset can communicate with the wireless communication means of the computer over a short range thus said wireless communication means comprises a short range transceiver); a voice transceiver operatively connected to the computer (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the wireless communication means also comprises a transceiver for voice/data communications over a cellular network thus said wireless communication means will also comprise a voice transceiver for the transmission and reception of voice); a hands-free voice communications device unit in communication with the short-range transceiver (Figure 3a, Figure 7, Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset is the hands-free voice communications unit); the computer adapted to receive voice sound information from the voice transceiver; and the computer adapted to send voice sound information to the voice transceiver (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the wireless communication means also comprises a transceiver for data/voice communications, said wireless communication means along with the microphone and speakers give the computer wireless phone capability).

Ditzik does not specifically teach a computer adapted to receive voice sound information from a short-range transceiver; and the computer adapted to send voice

sound information to the short-range transceiver and a hands-free device comprising a plurality of input sensors.

Puthuff teaches a computer adapted to receive voice sound information from a short-range transceiver and the computer adapted to send voice sound information to the short-range transceiver (Column 1 lines 51 – 54, Column 2 lines 53 – 57, Column 3 lines 34 – 43, the PCN is the short-range transceiver).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the PCN circuitry taught by Puthuff in the computer of Ditzik for the purpose of enabling remote voice control of said computer as taught by Puthuff.

Ditzik in view of Puthuff does not teach a hands-free device comprising a plurality of input sensors.

Aoki teaches a hands-free device comprising a plurality of input sensors (Figure 1, Column 6 lines 23 – 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the earset of Ditzik in view of Puthuff with the ear piece circuitry of Aoki for the purpose of providing an earset that automatically processes the speech sending signal in accordance with use environments, that have high noise and ambient noise, to send speech of the best tone quality as taught by Aoki.

7. Claims 25 – 29, 31 – 35, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (5,983,073) in view of Aoki et al. (5,933,506).

Regarding Claim 25, Ditzik teaches a method of voice communication comprising: transceiving voice sound information between a hands-free voice communication unit and a computer over a short-range first communications channel (Figure 3a, Figure 7, Column 8 lines 14 – 19, Column 8 lines 25 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset is the hands-free voice communications unit, said earset can communicate with the wireless communication means of the computer over a short range link); transceiving voice sound information between the computer and a remote location over a second communications channel (Column 8 lines 43 – 45, the computer will relay voice information via the wireless communication means on a channel configured for transmitting to a wide area network such as a PCS network).

Ditzik does not teach a hands-free voice communication unit comprising a plurality of sensors.

Aoki teaches a hands-free voice communication device unit that comprises a plurality of input sensors (Figure 1, Column 6 lines 23 – 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the earset of Ditzik with the ear piece circuitry of Aoki for the purpose of providing an earset that automatically processes the speech sending signal in accordance with use environments, that have high noise and ambient noise, to send speech of the best tone quality as taught by Aoki.

Regarding Claim 26, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 25. Ditzik further teaches processing voice sound information (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the computer can transmit

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and receive voice information via the wireless communication means thus there will be processing of said voice information).

Regarding Claim 27, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 25. Ditzik further teaches transducing voice sound information at the hands-free voice communication unit (Column 8 lines 22 – 27, Column 8 lines 38 – 42, the sound energy will be converted to electrical energy for transmission to the computer).

Regarding Claim 28, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 26. Aoki further teaches transducing a bone conduction signal (Column 6 lines 23 – 43).

Regarding Claim 29, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 25. Ditzik further teaches identifying the hands-free voice communication unit (Column 8 lines 25 – 27, Column 8 lines 38 – 42, the earset uses a short-range communication protocol such as Bluetooth to communicate with the notebook, the Bluetooth protocol uses a polling method in which a master device (notebook) polls the slave devices (earset) and receives an active member address (AM\_ADDR), which is the identifier, from said slave devices, the access will be granted based on the validity of said AM\_ADDR).

Regarding Claim 31, Ditzik teaches a method of voice communication comprising: transducing a signal at an earpiece (Column 8 lines 22 – 27, Column 8 lines 38 – 42, the sound energy will be converted to electrical energy for transmission to the computer); sending the signal to a computer (Figure 7, Column 8 lines 38 – 42);

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creating a voice sound signal at least partially based on a voice signal at the computer (Column 8 lines 43 – 45, the voice signal will sent to the computer and the computer will retransmit said signal to the wide area network, said retransmission occurs do to the reception of the voice signal from the earpiece thus the computer will create a voice signal based on the voice signal received from the earpiece) transmitting the voice sound signal over a voice communications channel (Column 8 lines 43 – 45).

Ditzik does not teach a bone conduction signal.

Aoki teaches a bone conduction signal (Column 6 lines 23 – 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the earset of Ditzik with the ear piece circuitry of Aoki for the purpose of providing an earset that automatically processes the speech sending signal in accordance with use environments, that have high noise and ambient noise, to send speech of the best tone quality as taught by Aoki.

Regarding Claim 32, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 31. Ditzik further teaches transducing an air conduction signal and wherein the voice sound signal is at least partially based on the air conduction signal (Column 8 lines 43 – 45, the voice signal will sent to the computer and the computer will retransmit said signal to the wide area network, said retransmission occurs do to the reception of the voice signal from the earpiece thus the computer will create a voice signal based on the voice signal received from the earpiece).

Regarding Claim 33, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 32. Ditzik further teaches wherein the air conduction signal is

transduced at an earpiece (Column 8 lines 22 – 27, the earset comprises a microphone, which is an air conduction sensor, thus an air conduction signal will be converted to a voice sound signal when a user speaks into said microphone).

Regarding Claim 34, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 32. Ditzik further teaches wherein the air conduction signal is transduced at the computer (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the microphone is an air conduction sensor thus when the user speaks into said microphone an air conduction signal will be converted to a voice sound signal).

Regarding Claim 35, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 33. Ditzik further teaches transducing a second air conduction signal at the computer wherein the voice sound signal is at least partially based on the second air conduction signal (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the user at the computer can speak into the microphone a plurality of times thus there will be a second air conduction signal that will be converted to a voice sound signal).

Regarding Claim 42, Ditzik teaches a communications system comprising: a computer (Figure 3a, Figure 7); a short-range transceiver operatively connected to the computer (Figure 3a, Figure 7, Column 8 lines 14 – 19, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset can communicate with the wireless communication means of the computer over a short range thus said wireless communication means comprises a short range transceiver); a voice transceiver operatively connected to the computer (Figure 3b, Figure 7, Column 8 lines 8 – 11, Column 8 lines 59 – 64, the wireless communication means also comprises a transceiver for voice/data communications over

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a cellular network thus said wireless communication means will also comprise a voice transceiver for the transmission and reception of voice); and a hands-free voice communications device having an air conduction sensor in communication with the short-range transceiver (Figure 3a, Figure 7, Column 8 lines 22 – 27, Column 8 lines 32 – 35, Column 8 lines 38 – 42, the earset is the hands-free voice communications unit, the microphone is the air conduction sensor).

Ditzik does not teach a hands-free voice communications device having an air conduction sensor and a bone conduction sensor in communication with the short-range transceiver.

Aoki teaches a hands-free voice communications device having an air conduction sensor and a bone conduction sensor (Column 6 lines 23 – 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the earset of Ditzik with the ear piece circuitry of Aoki for the purpose of providing an earset that automatically processes the speech sending signal in accordance with use environments, that have high noise and ambient noise, to send speech of the best tone quality as taught by Aoki.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (5,983,073) in view of Puthuff (6,112,103) in further view of Aoki et al. (5,933,506) as applied to Claim 1 above, and further in view of Egtesadi et al. (5,982,904).

Regarding Claim 2, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Ditzik in view of Puthuff and in further view of Aoki does not teach a headset.

Eghtesadi teaches a headset (Column 2 lines 45 – 48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the headset taught by Eghtesadi as an alternative means for hands-free communication in the system of Ditzik in view of Puthuff and in further view of Aoki.

9. Claims 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (5,983,073) in view of Aoki et al. (5,933,506) as applied to Claim 25 above, and further in view of Talmor et al. (5,913,196).

Regarding Claim 30, Ditzik in view of Aoki teaches all of the claimed limitations recited in Claim 25. Ditzik in view of Aoki does not teach comparing the voice sound information to voice sound information from a known source for security purposes.

Talmor teaches comparing the voice sound information to voice sound information from a known source for security purposes (Column 5 lines 18 – 29, Column 7 lines 53 – 62, Column 8 lines 6 – 9, in order to authenticate the speaker's voice there will be a comparison between the speaker's voice and a known sound).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the authentication method taught in Talmor in the computer of Ditzik in view of Aoki as an alternative means for preventing an unauthorized user of



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the earpiece from communicating with the computer for further access to the wide area network as taught by Talmor.

10. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (5,983,073) in view of Talmor et al. (5,913,196).

Regarding Claim 44, Ditzik teaches all of the claimed limitations recited in Claim 43. Ditzik does not teach wherein the identifier is a voice sample.

Talmor teaches an identifier that is a voice sample (Column 5 lines 18 – 29, Column 7 lines 53 – 62, Column 8 lines 6 – 9, in order to authenticate the speaker's voice there will be a voice analysis of the speaker's voice).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the authentication method taught in Talmor in the computer of Ditzik as an alternative means for preventing an unauthorized user of the earpiece from communicating with the computer for further access to the wide area network as taught by Talmor.

11. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (5,983,073) in view of Puthuff (6,112,103) and in further view of Aoki et al. (5,933,506) as applied to Claim 1 above, and further in view of Ramesh et al. (5,943,324).

Regarding Claim 37, Ditzik in view of Puthuff and in further view of Aoki teaches all of the claimed limitations recited in Claim 1. Ditzik in view of Puthuff and in further view of Aoki does not teach wherein the voice transceiver is adapted for satellite

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communications.

Ramesh teaches wherein the transceiver is adapted for satellite communications (Column 4 lines 36 – 42).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the satellite transceiver taught in Ramesh in the mobile computer of Ditzik in view of Puthuff and in further view of Aoki for the purpose of enabling the computer to communicate using a satellite network thus creating a more versatile mobile computer.

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Raymond S. Dean  
May 3, 2005



NAY MAUNG

SUPERVISORY PATENT EXAMINER